

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER No. 88-121

SITE CLEANUP REQUIREMENTS FOR:

NCH CORPORATION AND MOHAWK LABORATORIES
932 KIFER ROAD FACILITY
SUNNYVALE, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. Mohawk Laboratories is a division of NCH Corporation and both shall be referred to hereinafter as the discharger(s) Mohawk Laboratories owns and operates a chemical blending and packaging plant located at 932 Kifer Road in Sunnyvale.
2. The discharger's plant has an above-ground tank farm which has a maximum total capacity of 157,000 gallons. These tanks have since 1967, stored the following raw materials: 1,1,1-trichloroethane, liquid caustic soda, naphthal spirits, methylene chloride, ethylene glycol monobutyl ether, kerosene, xylene, isopropanol, aromatic solvent, aliphatic solvent, a blend of tetrachloroethylene (30%) and methylene chloride (70%) process oil, deodorized kerosene, and muriatic acid.
3. Subsurface investigations have revealed significant levels of organic chemical pollution in soils and groundwater beneath the site. Chemicals detected onsite include trichloroethylene (TCE), trans-1,2-dichloroethene (DCE), perchloroethylene (PCE), xylene, toluene, and acetone.
4. Pollutant concentrations from a soil boring taken near the tank farm were as high as 900,000 ppb for TCE, 920,000 ppb for PCE, 240,000 ppb for trans-1,2-DCE, 19,000 ppb for xylene, 3,200 ppb for toluene, and 10,000 ppb for acetone. Pollutant water concentrations from monitoring wells were as high as 40,000 ppb for TCE, 13,000 ppb for PCE, 500,000 ppb for trans-1,2-DCE, 1,300 ppb for toluene, 1,100 ppb for xylene, and 70,000 ppb for acetone.
5. The discharger was initially requested to begin subsurface investigations on October 2, 1986. Although several subsurface investigations have been conducted, as of June, 1988, the extent of contamination has not been completely defined.

6. On May 13, 1988, the Executive Officer issued a Cleanup and Abatement Order to the discharger requiring the submission of a technical report acceptable to the Executive Officer containing a proposal to conduct additional subsurface investigations onsite and offsite, to submit the results of these investigations and to submit proposals for soil and groundwater remediation. The discharger submitted the work plan requested in CAO No. 88-69 on May 31, 1988 and has now installed additional onsite and offsite confirmatory "A" and "B" aquifer monitoring wells.
7. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives and beneficial uses for South San Francisco Bay and contiguous surface and groundwaters.
8. The existing and potential beneficial uses of the groundwater underlying and adjacent to the facility include:
 - a. Industrial process water supply
 - b. Industrial service supply
 - c. Municipal and Domestic supply
 - d. Agricultural supply
9. The discharger has caused or permitted, and threatens to cause or permit waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.
10. Measures to stabilize the pollutant plume need to be implemented to alleviate the threat to the environment posed by the continued migration of pollutants and to provide a substantive technical basis for designing and evaluating the effectiveness of final cleanup alternatives.
11. This action is an order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.
12. The Board has notified the dischargers and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.
13. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the discharger shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the beneficial uses of the waters of the State is prohibited.
2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of pollutants are prohibited.

B. SPECIFICATIONS

1. The storage, handling, treatment or disposal of polluted soil or groundwater shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The discharger shall conduct monitoring activities as needed to define the current local hydrogeologic conditions, and the lateral and vertical extent of soil and groundwater pollution from the Mohawk site. Should monitoring results show evidence of plume migration, additional plume characterization will be required.

C. PROVISIONS

1. The discharger shall submit to the Board technical reports on self-monitoring work performed according to a program prescribed by or amended by the Board's Executive Officer.
2. The discharger shall comply with Prohibitions A.1., A.2., and A.3., and Specifications B.1. and B.2. above, in accordance with the following time schedule and tasks:

COMPLETION DATE/TASK:

- a. COMPLETION DATE: November 30, 1988

TASK: SOIL REMEDIATION: Submit a technical report acceptable to the Executive Officer that either: 1.) documents commencement of implementation of soil remediation or 2.) contains the results of pilot work evaluating alternative soil remedial action technologies and containing a proposal for soil remediation for the entire site.

- b. COMPLETION DATE: November 30, 1988

TASK: "A" and "B" AQUIFER GROUNDWATER POLLUTION CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer which defines and includes the results of work performed to complete the vertical and horizontal characterization of the extent of groundwater pollution originating from the discharger's facility.

- c. COMPLETION DATE: August 31, 1988

TASK: PROPOSAL FOR PLUME STABILIZATION MEASURES: Submit a technical report acceptable to the Executive Officer containing a proposal to implement measures to stabilize the pollutant plume to prevent pollution migration to offsite areas.

- d. COMPLETION DATE: January 31, 1989

TASK: COMPLETION OF PLUME STABILIZATION MEASURES: Submit a technical report acceptable to the Executive Officer documenting completion of the construction and startup of facilities described in the technical report submitted for Task C.2.c.

- e. COMPLETION DATE: MAY 30, 1989

TASK: EVALUATE ONSITE HYDRAULIC CONTAINMENT MEASURES:

Submit a technical report satisfactory to the Executive Officer which evaluates the effectiveness of the onsite hydraulic containment systems to prevent any contaminant migration to offsite areas.

Such an evaluation shall include but need not be limited to confirmation of the flow capture zone of the extraction wells, establishment of the cones of depression by field measurements, and presentation of chemical monitoring data. Specific modifications to the system and an implementation time schedule shall be proposed in the event that the hydraulic control system is demonstrated not to be effective in containing and cleaning up the onsite pollutant plume.


3. The discharger shall submit chemical analytical results from groundwater and soil sampling conducted pursuant to this Order within 10 days of receipt by the discharger along with all of sampling locations.
4. If the discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the discharger(s) shall promptly notify the Executive Officer. In the event of such delays, the Board may consider modification of the task completion dates established in this Order.
5. Technical reports on compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted monthly to the Board commencing on September 15, 1988. On a monthly basis thereafter, these reports shall consist of a brief letter report that, (1) summarizes work completed since submittal of the previous report, and work projected to be completed by the time of the next report, (2) identifies any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles, and (3) includes, in the event of non-compliance with Provisions of this Order, written notification which clarifies the reasons for non-compliance and which proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on achieving compliance with the remaining requirements of this Order.
6. On a quarterly basis, commencing on November 15, 1988, the technical report shall include, but need not be limited to, updated water table and piezometric

surface contour maps, pollution concentration contour maps for all affected water bearing zones, cross-sectional geological maps describing the hydrogeological setting of the site, and appropriately scaled and detailed base maps showing the location of all monitoring wells and extraction wells, and identifying adjacent facilities and structures.

7. All hydrogeological plans, specifications, reports, and documents shall be signed by or stamped with the seal of a registered geologist, engineering geologist or professional engineer.
 8. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.
 9. The discharger(s) shall maintain in good working order, and operate, as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.
 10. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, shall be provided to the following agencies:
 - a. Santa Clara Valley Water District
 - b. Santa Clara County Health Department
 - c. City of Sunnyvale
 - d. State Department of Health Services/TSCD
- The Executive Officer may additionally require copies of correspondence, reports and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order to be provided to the U.S. Environmental Protection Agency, Region IX, and to a local repository for public use.
11. The discharger(s) shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:

- a. Entry upon premises in which in any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the terms and conditions of this Order.
 - c. Inspection of any monitoring equipment or methodology implemented in response to this Order.
 - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.
12. The discharger(s) shall file a report on any changes in site occupancy and ownership associated with the facility during the effect of this Order.
13. If any hazardous substance is discharged in or on any Waters of the State, or discharged and deposited where it is, or probably will be discharged in or on any Waters of the State, the discharger shall report such a discharge to this Regional Board, at (415) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m., and to the Office of Emergency Services at (800) 852-7550 during non-office hours. A written report shall be filed with the Regional within five (5) working days and shall contain information relative to: the nature of waste or pollutant, quantity involved, duration of incident, cause of spill, Spill Prevention, Control and Countermeasure Plan (SPCC) in effect, if any, estimated size of affected area, nature of effects, corrective measures that have been taken or planned, and a schedule of these activities, and persons notified.
14. The Board will review this Order periodically and may revise the requirements when necessary.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 20, 1988.


Steven R. Ritchie,
Executive Officer